Exhibit 31

ROUGH

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Case: Ocean Semiconductor v. Mediatek Inc.
Date: 11/2/21

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Court Reporter Name: Mary F. Bowman

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BY MS. KIECKEFER:

Q. Good afternoon, morning good morning. Afternoon where, you are. My name is Kieran Kieckefer and I represent western digital.

A. How do you do.

Q. Turning to paragraph 29 of your declaration, the western district of Texas declaration of Exhibit 1 --

A. It's Exhibit 1, which paragraph?

Q. 29.

A. OK.

Q. You note in paragraph 29 that a claim may be given a meaning that differs from the ordinary and customary meaning and then you have two different scenarios. Is that correct or is that a typo. Did you mean a claim or did you mean a claim term?

A. A claim term. I guess.

Q. And then you note that one can depart from the plain and ordinary meaning of a claim term only in two scenarios and those are the ones described in paragraph 29. Correct?

a pneumatic cylinder?

A. It is OK because it's part of the way he described in the specification, he said it's -- he is looking at in in the he is looking at it in a a broader way.

Q. Is it your opinion that the inventor of the 651 patent intended the terms pneumatic cylinder and hydraulic cylinder to mean essentially the same thing?

A. He didn't mean the same thing. He just said in a specification, that sometimes you lose hydraulic system, sometimes you use mechanical system, sometimes you use a hybrid system. So he really -- he created a stage that could be operated by using these various means. And he specifically felt that he should mention them because if he didn't feel you could use hydraulic, mechanical and so on, he wouldn't have mentioned. He specifically mentioned more than once.

Q. When you talk about -- excuse me, strike that.

Q. So we have 1078 claims that refer to pneumatic cylinders and some claims that refer to rack and pinion combinations and my question is whether it is your opinion that these terms are interchangeable with each other.

REPORTER'S NOTE: relationship

A. Well, I believe they be interchangeable because you can have pneumatic cylinder without rack and pinion and on the other scenario, you can have rack and pinion situations. So it's not -- they are not the same terms.

Q. And you have a same opinion with respect to pneumatic cylinders and hydraulic cylinders that those are not the same terms, correct?

A. They are related. You can have a system be a combination or hybrid to be able to move and adjust the angle of the stage and so on.

Q. I guess, I don't think that answered my question. My question is whether pneumatic cylinders and hydraulic

cylinders are not the same term, is that correct?

A. They are not the same term. But again, they are not the same term as far as what is the meaning but as far as what the patent said that you can use to move the stage, you can use either hybrid or hydraulic or pneumatic cylinder.

Q. Is it your contention, just one follow up point, you say that in paragraph 59 of your declaration -- and I can wait for you to go there. Eke.

Q. You said that pneumatic cylinder is a mechanical device used to generate a force. Do you see that?

A. Yes.

Q. Is it your opinion a pneumatic cylinder is a subset of the mechanical device category?

A. Not really. Because you can see that you can use mechanical force to operate a pneumatic cylinder but you can you can have a component like for example that after you move it 234 one direction,

word in it, which is a mechanism useful in adjusting the position of the wafer stage 40 may be comprised of any one of of a variety of devices your opinion would remain the same, that any one of the pneumatic mechanical hydraulic, electromagnetic or some combination thereof could be used. Is that correct?

A. Yes because if you look at figure 2, you can see that part of it could be pneumatic and part of it could be mechanical. For example.

Q. Turning to claim 19, which begins in column 12,?

A. Yeah, I have it.

Q. Claim 19 requires a plurality of pneumatic cylinders that are operatively coupled to the wafer stage, correct?

A. The plurality of pneumatic cylinder, yes.

Q. So in order to meet that claim limitation, you need at least two pneumatic cylinders that are connected to the stage, correct?

A. Yes.

Q. And then if you have multiple pneumatic cylinders connected to the stage, where would they be positioned relative to the stage?

A. They are shown in figure 5, I think. Let me go back there. It's not 5 -- I guess it is figure, figure 3 show one potential combination. It's a guess what you call a -- 49 -- well, yes, in figure 3, you have a big cylinder and inside it, you have three rectangle. And each of the rectangle would be one, it's a top view and each of the rectangle would be connected to a pneumatic cylinder.

So this is just one way to adjust, to put them.

Q. I think it's actually the bottom view is what the patent says?

A. Yeah, OK, the bottom view. But yeah, but it shows where the three connect to the stage.

Q. Yup. And then so let's just use this figure 3 as an example where you have

the three pneumatic cylinders, if you extend the shaft of only one of them and the other two remain in place, isn't it correct that the stage would tilt?

A. Yes, I mean yeah, assuming -- they have to adjust it or make it so it would be possible for it to tilt.

Q. But it is possible that the stage would tilt if you are extending the shaft of only one and keeping the other two roughly in place, is that correct?

A. Yeah.

Q. And the only way to raise the stage using that same example, the only way to raise the stage is if all of the shafts of each cylinder move together and remain it at the same height, is that correct?

MR. PARKER: Objection, vague.

A. So can you repeat the question.

Q. Sure.

The only way to raise the stage is if all of the shafts of each cylinder move together and remain at the same height. Correct?

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MR. PARKER: Same objection.

A. This is assuming that there is no other way to move the stage in a vertical direction or perpendicular to the page.

Q. Sure, let me revise the question slightly.

Is one way to raise the stage the scenario when all of the shafts of each cylinder move together and remain at the same height? Would you agree with that?

A. That means I have to move higher to the starting position but the same amount or the of the three shafts for it to be raised by the amount to go higher by the amount -- by the mount -- so can you repeat the part that you have recorded. -- in the beginning it should be to move from the starting position because I'm not sure if you are saying form.

So if you repeat if you change it now from the starting position.

(Record read)

A. Well, they don't have necessarily even to move together but all of them has

to -- between the starting position, before you start moving the shaft until you finish moving all of them, all of them is to move by the same amount from the starting position to the end position.

Q. At paragraph 65 of your declaration, you reference electrodes, do you see that? let me know when you're there?

A. OK, I have it.

Q. So that's then if you turn to the patent if you look at column 5 and line 20.

A. Give me a minute.

Q. Sure.

A. OK.

Q. At line 20 it says in many tools the wafer stage is actually an electrode that is used to ground the wafer while a plasma is created above the wafer by other electrodes or coils in such tools.

Do you see that?

A. Yes.

Q. So you would agree that according to the specification in this scenario, it

says that the stage is an electrode, correct?

A. Yes.

Q. And it does not say that the electrode adjusts the stage, correct?

A. The this sentence just defined what the stage. It doesn't talk about movement.

Q. Correct. And that's my question. It does not say that the electrode adjusts the stage. Correct?

A. This specific sentence does not say it.

Q. If you could turn to claim 19, which is in column 12.

A. OK.

Q. And claim 19 requires that the pneumatic cylinders be separate components from the stage, correct?

A. It says are coupled to the stage.

Q. Yes, I see that. Would you agree that that means that the pneumatic cylinders are separate from the stage?

A. Well, I mean --

MR. PARKER: Objection, vague.

A. The question what you mean by separated. Coupled means it is connected to the stage. So they are not apart of the whole big system, I mean. It doesn't say that they are not connected to it.

Q. Yeah, let me rephrase.

With respect to claim 19, they're talking about the stage and the cylinder that are connected. And my question is -- I agree and I see that they're connected but you will agree that they are separate components that are connected, correct?

A. They are separate elements that are attached one another by being coupled.

Q. Right.

In paragraph 68 of your declaration?

A. OK.

Q. Does that mean you're there?

A. Yes.

Q. Great. You state that pneumatic cylinders can be but need not be cylindrical, do you see that?

you talk about what are the potential areas it could be used for.

Q. I'm sorry, are you looking in the patent?

A. Yes, sorry that you cannot see, I'm looking --

Q. That's what I thought?

A. I'm looking at the column 1 and 2 and then starting so repeat the question.

Q. Is it your opinion that all of the process operations that are taught by the 651 patent have to occur within the process chamber?

A. The one that.

A. Yes, they have to occur within the process chamber.

Q. OK.

MS. KIECKEFER: That concludes my questioning, I'm going to pass the torch to I believe it is Mr. Lynch. Examination by thank you, Mr. Maltiel. Lynne good evening, Mr. Maltiel, I'm going to go ahead for a little bit since we just took a break if that's

Q. Again, I just want to talk about situations in which the wafer -- ex- cubes me, strike that.

Q. If faults are only defected when the wafer does not meet the data sheet specification, then if the data sheet -- if the wafer is within the specs of the data sheet, no fault would be detected, correct?

A. I mean it's not accurate -- or maybe I didn't explain it enough. This equipment is all the time the equipment that process the wafer is all the time monitored. So you will have a situation that you see the temperature fluctuate or gas pressure was too high or too will he and you use this information correlated with how the wafer come out at the end of the production line to try to see which of this fault that happened in the equipment caused problems that caused the wafer to fail, not to meet the data sheet.

So it is sort of an interactive process.

Q. Understood, so if the wafer

hasn't failed and it's within the specifications, there would be no reason to believe any fault has occurred in the tool, correct?

A. Yes, only when the wafer doesn't meet specification, you can then try to pinpoint what caused -- what was the fault that caused it.

Q. So I want to now turn your attention to what's been marked --

A. Let me elaborate though so that you -- like for example, you also on test wafer during lesses say deposition as a process and you see that the gate come too thick, the thickness is too high or too low so you don't need to wait for the end of the processing to see if it conform to the data sheet because you know it's going to be defective, so you know as the end. So it is as a way to monitor, it's not only at the end of the line.

Q. Understood. But in that situation that you just gave, even in the middle of the process, it would already be

to an actual fault do you understand that the construction is referring to a fault that has caused the wafer to be outside of the specification in the data sheet?

A. Yes.

Q. So the -- another way to describe the construction of a significant fault proposed by plaintiffs and agreed to by you is that a significant fault is any fault that causes the wafer to be out of specification from what is described in the data sheet?

A. Yes. It's not necessarily the full wafer but some dyes on the wafer.

Q. Right, some part of the wafer is out of specification?

A. Yes.

Q. Isn't that -- that is simply the same definition as a fault?

A. No, because you see that you have a fault, the -- what happened to the equipment, like a fault like the way we said temperature is too high, the pressure is out of range and this is the fault at

temperature fault to be significant and not the pressure fault given that even if pressure was in range, the wafer would still be unacceptable?

A. If the wafer was range for the pressure but out of range for the temperature, you consider the temperature to be the fault.

Q. In my example both temperature and pressure are out of rake but the temperature is so out of range it alone would cause an issue by itself. Does that make sense to you?

A. Well, in such case the temperature by itself would be a significant fault but even if in a case where the temperature wouldn't be so extreme but would be slightly out of range and if it is slightly out of range and the pressure is out of range and it falls on each -- then the combination is also a significant fault.

Q. If one factor alone is enough that would be the significant fault?

MR. PARKER: Objection.

Misstates.

A. If one factor is out of range and the device fails, then that factor is a significant fault.

Q. I'm going to turn your attention to paragraph 84 and the chart below paragraph 84 of your declaration.

A. OK.

Q. This is a proposed construction for the term in claim 7 so the term is determining in said computer whether said program is a significant factor.

And plaintiffs proposed alternative is the parameter that provides a significant contribution to the fault.

Do you see that?

A. Yes.

Q. Do you agree with that alternative construction?

A. Yes.

Q. What is a parameter that provides a significant contribution to the fault?

A. It's like we discussed, if the

to try to interpret something that is vague in the claim.

Q. Is any part of the intrinsic evidence more important than another part?

A. I'm not sure. I think the specification are -- I mean the claim are of course the most important but the specification I think are the highest priority after the claims themself.

Q. Is it your opinion, Mr. Maltiel, that if the intrinsic evidence is unambiguous, it's appropriate to consider ex- continue sick evidence?

A. When you say unambiguous, you don't need to consider anything, I wouldn't considered ex- extrinsic -- I wouldn't consider extrinsic if intrinsic is fairly clear and not ambiguous at all.

Q. Accident your opinion that the intrick sick evidence of the 097 patent defines the race ultra-thin resist?

A. Yes.

Q. Is it your opinion that the specification of the 097 patent is

unambiguous? On that point?

A. Yes.

Q. If the court disagrees and finds that the specification ambiguous, should the court consider extrinsic evidence?

A. I don't know, I'm not an attorney.

MR. PARKER: Calls for a legal conclusion.

A. I cannot say to a legal conclusion.

Q. Let's talk for a few minutes on the doctrine of claim differentiation are you familiar with those words?

A. In general, again, I'm not an attorney.

Q. What is your you hadding of what claim differentiation?

A. That to try to decide what level the claim is to be different to stand on their own.

Q. I'm sorry, madam court reporter could you read back that answer.

(Record read)

ultra-thin resist is less than 2500 angstroms, did they?

A. Maybe this is why he put claim 4. I mean I don't know the mind of the inventor like if I say I didn't met him, I didn't know him. I didn't interview him.

Q. Mr. Maltiel, let's turn back to column 1, lines 43 through what,?

A. OK.

Q. Do you see the phrase there is considered to be?

A. Yes.

Q. What do the words considered to be mean to you as a person of ordinary skill in the art?

A. In his experience people would recognize it to be this thickness, but at the same time, you want to be sure that they know what he means.

Q. A person of ordinary skill in the art at the time of the alleged invention, where would you go to look for what other people of skill in the art recognized as an ultra-thin resist?

A. I'll ask them. I'm basically ask the people or try to find a record of what is it considered to be.

Q. Would that include publications like in IEEE or SPIE?

A. I wouldn't need to if I am reading this patent it mention things like 3 or 4 times what it is, there are at least twice in the figure they mention it. So it would be clear enough that what the inventor, when he is talking about ultra-thin resist, what he need an means.

Q. So did you consider the fact that the inventor didn't use the word is by itself but used the phrase is considered to be?

A. I mean it's possible that he just was talking here that potentially that maybe other people call ultra-thin resist different thicknesses but he want for people to be clear that when he is talking in this patent of full ultra-thin resist, it has to be less 2500 angstroms.

Q. Wouldn't it have been clearer he

don't know why he didn't include.

Q. Is there any difference in your view between using the phrase is considered to be as opposed to just the word is? In lines 43 through 45 of column 1 of the 097 patent?

A. There is a difference but different people use different words in different circumstance. So I cannot speculate what was his reasoning to include the word considered.

Q. So I want to run back to a question I asked you before, which was as a person of ordinary skill in the art if you wanted to know what other people of ordinary skill in the art recognized as ultra-thin resist, where would you go look? Do you remember that question?

A. Yes.

Q. And I believe you said that you would talk to the ear people, talk to other people of the skill in the art, is that correct?

A. Yes.

that for the 248, you need 5,000 angstrom and for the 193 nanometer, you need 4,000 angstrom.

Q. So my question is a little different. The next sentence that talks about the UTR thickness?

A. Um-hm.

Q. Does that apply for both 248 nanometer lithography and 193 nanometer lithography?

A. He doesn't -- he doesn't explain there, he doesn't define it.

Q. Let's take the case for example of 248 nanometer lithography to begin with. Am I right that the patent describes that the standard thickness is 5,000 angstroms?

A. OK.

Q. And then the -- there is a sentence at 43 lines 43 through 45, states that under 2500 angstroms is an ultra-thin resist. Correct?

A. OK. Yeah that's in 44, 45, yeah.

Q. How does the patent describe a resist with a thickness between 2500

angstroms and 5,000 angstroms for 248 nanometer lithography?

A. He is not talking about it. He is talking about a case where you use ultra-thin resist.

Q. So it's accurate to say that the patent doesn't tell you how to describe a resist that has a thickness of 2500 angstroms to too 5,000 angstroms with 248 nanometer lithography?

A. No, no, he is talking about different situation when you need to use ultra-thin resist and you describe your process that you can use it to create the small dimension of lines.

Q. Is my question is different. I think we have established that the patent describes a resist with the thickness of under 2500 angstroms as ultra-thin and then the patent also describes for 248 nanometer lithography that a resist of 5,000 angstroms is known as standard in terms of its thickness, what about a resist of 4,000 angstroms for 248 nanometer lithography,

patent, is that photo resist standard thickness, ultra-thin thickness or some other thickness?

A. He doesn't give it a name, standard or whatever. He is just shall did-this is just a background if you want to make features.5 micron are.4..5 is standard photo he is resist,.4 he doesn't gave it a name. But for my case when Iing want to make smaller features than either.5 or.4, you should use the ultra UTR with the resist thickness of 2500 and depose this with the hard mask and so and and you will be able to produce the small dimension. Even claim 1 it starts by saying to a -- it is someplace else that you make a small, small as in the photo resist dimensions.

Q. So I want you to focus Mr. Maltiel on 193 nanometer lithography for a moment. Based on the teaching of this patent limb using 193 nanometer lithography and a resist as thickness of 3,000 angstroms, does that resist have a standard thickness, an ultra-thin thickness

or some other thickness?

A. He doesn't define it.

Q. Mr. Maltiel, did you look, in preparing your reports and opinions did you look for any evidence as to what the patent applicant considered a resist with the thickness between 2500 angstroms and 5,000 angstroms to be an ultra-thin resist for 248 nanometer lithography?

MR. PARKER: Objection, vague.

A. I mean I looked to see what the patent use and see what was defined clearly in the patent and if it makes sense in the device works and consider it a workable device.

Q. Did you look at anything outside the patent?

A. I looked at the as I said of other patent and I'm familiar with the industry, I develop on many technology of this nature, so I'm familiar with the area so I blocked at some of the aspect.

Q. For 248 nanometer lithography, did you find any instances where a person

either 4,000 or 5,000 angstroms of the sentence before. Do you remember those questions?

A. Yes, I do.

Q. For the purposes of the invention described in the 097 patent and in particular the claims, does it matter what those thicknesses are called, the thicknesses between the 2500 angstrom and the 4 or 5,000 angstrom?

A. No, not at all. It's just a background of the invention. They described clearly just what the UTR thickness and this is what the invention is all about.

Q. And Mr. Bowen asked you a bunch of questions about the final sentence lines 43 to 45 and focused and various times on specific words or groups of words but when you read that sentence in the context of one of ordinary skill in the art, was the sentence clear to you as to what the patent was intending to convey to one of ordinary skill in the art?

A. Yes. Yeah, it was clear. It was clear talking about UTR thickness to be ultra-thin risks Syms it is less than 2500 angstrom in thickness.

Q. And then if you if you could turn to column 3, Mr. Bowen asked you some questions about the first sentence on the top of column 4, do you recall those questions?

A. Yes.

Q. And particularly the use of the term UTR layer there and whether or not it should -- well, that it it doesn't specifically mention less than 2500 angstroms, do you recall that?

A. Yes.

Q. Now if you look at column 3, starting at line 58, there is a sentence, it starts the present invention.

A. Yes. I see.

Q. In that sentence -- well, the sentence says the present invention will now be described with respect to the process flow of figure 3 and the